

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

GREEN MOUNTAIN GLASS, LLC AND
CULCHROME, LLC,

Plaintiffs,

v.

SAINT-GOBAIN CONTAINERS, INC. d/b/a
VERALLIA NORTH AMERICA,

Defendant.

Civil Action No. 1:14-cv-00392-GMS

JURY TRIAL DEMANDED

**DEFENDANT'S RESPONSE TO
PLAINTIFFS' OPENING CLAIM CONSTRUCTION BRIEF**

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I. Introduction

This case is about technology that Plaintiffs’ predecessors developed nearly two decades ago in an effort to turn a waste product of glass recycling – “unsorted mixed color glass cullet” – into a product useful to glass manufacturers. The industry was wholly uninterested. During that time period, Plaintiffs and their predecessors failed to sell or license their technology to a single glass manufacturer. Now, with their initial patents close to expiration, Plaintiffs, through this lawsuit, are making a last ditch effort to monetize their technology by challenging practices that their patents clearly do not cover.

They attempt this here by asking the Court for a Claim Construction that they did not obtain, and that they expressly disclaimed, in the U.S. Patent and Trademark Office (“USPTO” or “Office”) nearly twenty years ago. Specifically, they ask the Court to construe the term “unsorted mixed color cullet” to extend to color sorted cullet that is subsequently blended into multi-color mixtures. Plaintiffs have known, since at least January 1999, that Ardagh has used only sorted single-color cullet or multi-color blends of sorted single-color cullet. Except for one instance over 16 years ago,¹ Plaintiffs have never, until this lawsuit, challenged Ardagh’s use of cullet as infringing. This is because, as explained below, Plaintiffs’ patents deal with the waste product of the sorting process, not the sorted single color cullet (or blends of sorted cullet) which results. As explained in Ardagh’s Opening Brief and below, Plaintiffs expressly disclaimed the use of all but the unsorted waste product of the glass recycling process. Indeed, Plaintiffs’ ability to proceed in this action hinges entirely on the Court’s adoption of their

¹ In February 1999, Plaintiffs’ predecessor wrote to Ardagh’s predecessor, contending that its use of multi-color blends of color sorted cullet required a license under the Mosch Patent. Ardagh’s predecessor, through counsel, rejected this contention and explained his reasoning. Despite numerous interactions between the Parties in the ensuing years, Ardagh never heard from Plaintiffs’ predecessors or Plaintiffs on this issue again until the filing of this lawsuit.

proposed construction of “unsorted mixed color glass cullet.” This Court can and should end this case now by rejecting Plaintiffs efforts to recapture what they expressly disclaimed at the time they applied for their Patents.

II. Discussion

A. “unsorted mixed color glass cullet”

Ardagh contends that “unsorted mixed color glass cullet” and “mixed color glass cullet” must be construed to mean “post-consumer broken pieces of glass of mixed colors that have never been sorted by color.” (D.I. 61, Defendant’s Opening Claim Construction Brief at 5.) This is consistent with the use of the term in the claims, the specification, and file history. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (“To ascertain the meaning of claims, we consider three sources: The claims, the specification, and the prosecution history.”), *aff’d* 517 U.S. 370 (1996). Plaintiffs, on the other hand, construe “unsorted mixed color glass cullet” and “mixed color glass cullet” to include cullet that was once sorted and subsequently remixed. This is a flawed construction that ignores the specification and prosecution history.²

Although the Mosch Patent (U.S. Patent No. 5,718,737) offers introductory descriptions of cullet that might be pieced together to seemingly include cullet other than post-consumer unsorted cullet, it is clear the entirety of the Specification in the Mosch Patent (and the Lehman Patent – U.S. Patent No. 6,230,521)³ is directed to the beneficial use of a previously

² Plaintiffs and Ardagh agree that “unsorted mixed color glass cullet” and “mixed color glass cullet” and variations thereof mean the same thing, and have the same meaning, in both the Mosch Patent and the Lehman Patent.

³ The Lehman Patent is identified because it copies nearly verbatim extensive portions of the Mosch Patent, which should be interpreted as it was during the Mosch Patent prosecution. Since the Lehman Patent adopts the term “mixed color glass cullet” from the Mosch Patent, the meaning of that term in the Lehman Patent is bound by the clarifications of that term made

worthless material, a by-product of post-consumer glass recycling. The Mosch patent, itself, indicates “mixed color cullet” is the unsortable waste material by-product of glass recycling:

A **by-product of glass recycling**, even when an attempt is made to sort the glass by color, is a quantity of mixed colored pieces.

The color distribution of the glass in **post-consumer** solid municipal waste, and accordingly, in typical mixed color cullet, varies regionally. A typical color distribution is approximately 65% flint (colorless), 20% amber, and 15% green. To date, mixed colored cullet has had only limited commercial use, and may be used as an aggregate in paving material, land-fill cover, or some similar use, but often is discarded in landfills. The mixed colored material is substantially less valuable than color sorted cullet.

(Mosch Patent at 1:65-2:9 [J.A. Tab 1 at A0002] (emphasis added); Lehman Patent 1:63-2:7 [J.A. Tab 2 at A0049].) Plaintiffs cannot, now, 20 years after Mosch wrote those words, retract them, nor should this Court allow them to do so. The Specification even notes that, because sorting is not fully effective, there is a need to “develop a process for re-using mixed colored glass, wherein mixed colored cullet can be used like color sorted cullet.” (See Mosch Patent, 2:10-13 [J.A. Tab 1 at A0002].)

During prosecution of the Mosch Patent, the Patentee filed a Preliminary Amendment addressing a rejection under 35 U.S.C. § 103 made in the parent application.⁴ The Office rejected the claims in light of “applicants’ admission in the Specification that mixed color cullet is used in the glassmaking art.” (Mosch Patent Application, Prelim. Rejection, at 3 (GM000770) [J.A. Tab 4 at A0090] (emphasis added).) In response, the Patentee amended the title of invention, the Abstract, the claims, and the specification:

during the prosecution of the Mosch Patent. Plaintiffs’ argument that Ardagh is improperly importing the term “unsorted” into the Lehman Patent where it is not used is therefore simply incorrect.

⁴ U.S. Patent Application No. 08/399,299 filed on March 3, 1995 by Duane A. Mosch, Frank G. Pringle, and Kevin J. Coffey.

to clarify that the invention relates to a method of creating recycled glass products of a particular color from unsorted mixed color glass cullet, which has heretofore simply been discarded in land fills, used in paving materials, and the like.

(Mosch Patent Application, Preliminary Amendment at 14-15 (GM000061-62) [J.A. Tab 5 at A0107-08].) In addressing the alleged admission, the Patentee indicated that:

[The glass sorting] process is imprecise, and mixed color pieces are a common by-product of the sorting process. [T]o date, the unsorted mixed color pieces have been used in paving materials and as land fill. Thus, while sorted single color glass cullet has indeed been recycled into new glass products, the unsorted mixed color glass cullet has not.

(*Id.* at 17 (GM000064) [J.A. Tab 5 at A0110].) The Patentee continued:

Applicant submits that the prior art does not evidence that it would have been known to those skilled in the art to use unsorted mixed color glass cullet to make recycled glass products of a particular color. On the contrary, the cited language in the specification establishes that such by-products are conventionally disposed of and not recycled into new glass products.

(*Id.* at 18 (GM000065) [J.A. Tab 5 at A0111].) The Patentee thus unequivocally links “such by-products” to “unsorted mixed color glass cullet.” In doing so, the Patentee acknowledges that “unsorted mixed color glass cullet” is the valueless waste product and not some later blend of valuable sorted single color cullet. Plaintiffs admit “unsorted mixed color glass cullet” and “mixed color glass cullet” and variations thereof all mean the same thing. In light of the Specification and Prosecution History, that is “post-consumer broken pieces of glass of mixed colors that have never been sorted by color.”

Plaintiffs contend Ardagh’s proposed construction improperly “exclude[s] from the claims the ‘glass producer waste cullet’ that the specification indicates may compose mixed colored cullet in the patents’ preferred embodiments.” (D.I. 60, Plaintiffs’ Opening Claim Construction Brief at 6.) Ardagh does no such thing. To the contrary, the claim language uses

the open ended “comprising” transitional phrase, which leaves the claim interpretation open, even under Ardagh’s proposed construction, to the inclusion of additional cullet streams, including glass producer waste cullet. *See Dippin’ Dots, Inc. v. Mosey*, 476 F.3d 1337, 1343 (Fed. Cir. 2007) (“‘Comprising’ . . . indicates here that an infringing process could practice other steps in addition to the ones mentioned. [. . .] The presumption raised by the term ‘comprising’ does not reach into each of the six steps to render every word and phrase therein open-ended especially where, as here, the patentee has narrowly defined the claim term it now seeks to have broadened.”). Nothing in Ardagh’s construction excludes additional cullet streams as ingredients. They simply are not part of the claimed “mixed color cullet.”

Thus, the “unsorted mixed color glass cullet” and “mixed color glass cullet,” and variations thereof, properly construed in light of the specification and prosecution history mean “post-consumer broken pieces of glass of mixed colors that have never been sorted by color.”

B. “at least two different colors”

Ardagh urges that the claim term “at least two different colors” does not include flint among the choice of colors, since flint is colorless. Plaintiffs state the limitation that flint is colorless “appears nowhere in the claim language or the specification.” (D.I. 60, Plaintiffs’ Opening Claim Construction Brief at 10.) Nevertheless, a few lines later, Plaintiffs contradict themselves, quoting the specification in reference to mixed color cullet: “typical color distribution is approximately 65% flint (colorless), 20% amber, and 15% green.” (*Id.* (emphasis added).) The Mosch specification contains at least nine (9) references to flint followed by the parenthetical “(colorless).” (Mosch Patent at Abstract, 2:4, 2:55, 3:32, 4:17, 6:16, 6:29, 6:44, and 7:12 [J.A. 1 at A001-0005].) Plaintiffs reference a single sentence in the Specification in order to suggest that flint has a color, but the sentence does not say that flint is a colored glass. (D.I. 60, Plaintiffs’ Opening Claim Construction Brief at 11.) The Patentee made a clear disavowal

that flint is anything other than colorless. This alone should demonstrate the disingenuous nature of Plaintiffs' position.

Plaintiffs point to Claim 2 as showing "at least two colors" includes flint. Claim 2 further defines the "unsorted mixed color glass cullet having glass of at least two different colors" as "comprising flint, green and amber cullet"; that is, two colors of cullet (amber and green) as well as colorless flint cullet. Nothing in Claim 2 demands, or even suggests that flint is a color or one of the "at least two different colors." Instead, it is simply part of the mixed color cullet. Nothing in Ardagh's proposed construction excludes the inclusion of flint glass; flint simply is not one of the claimed "at least two different colors," since it is colorless.

Plaintiffs urge a construction that again ignores the teachings found in the specification. Recycled materials typically include flint (colorless) containers, as well as amber colored containers and green colored containers. (Mosch Patent at 2:1-5 [J.A. Tab 1 at A0002].) The fact that mixed color cullet may contain flint (colorless) cullet, does not change the fact that, when at least two different colors are required, those colors are not flint (colorless) cullet. In a typical cullet stream, both green and amber glass are present which satisfies the claim limitation.

Flint glass is colorless, and therefore cannot help satisfy the claim term "glass of at least two different colors."⁵ There is no compelling reason why this Court should permit Plaintiffs to capture now what the Patentee never intended.

C. "specifying, prior to melting of said mixed color glass cullet, transmission properties of said recycled glass products of said particular color"

Ardagh proposes a construction clarifying that the transmission properties

⁵ Notably, in the Lehman Patent, the Patentee specifically claimed at least two of amber, green, and flint. The language is different from that in Mosch, seemingly chosen to clarify that Lehman, unlike Mosch, contemplates the potential of two color cullet such as flint and green or flint and amber.

specified be “sufficient to define said particular color.” Dr. Richard Lehman, the inventor, agreed during his deposition this term “means the transmission properties that are necessary to define the color. [. . .] It’s the transmission properties needed for a given color.” (Declaration of Desa L. Burton, Esq. (“Burton Decl.”) at Exhibit A ((Rough Draft) Transcript of the Deposition of Richard Lehman at 90 (lines 22-24)).)

Plaintiffs again urge this Court to ignore common sense and the specification while Ardagh’s construction makes it clear, as intended by the Patentee, that it is not enough that some transmission properties be specified. If the specified transmission properties are not sufficient to define the particular color, the calculations that follow would have insufficient data to proceed rendering the claim non-enabled and thus invalid. The specified transmission properties must be “sufficient to define said particular color.”

D. “glass coloring oxide agent”

In light of further consideration, and the Deposition of Dr. Richard Lehman, Ardagh withdraws its proposed definition of “glass coloring oxide agent” and proposes that either no construction or an “oxide agent that affects the color of glass” is appropriate. However, Ardagh maintains its objection to Plaintiffs’ proposed construction because it omits the term “oxide.” Ardagh also believes that “coloring oxide agent” and “key color indicator parameters” have interrelated or overlapping meanings and are therefore indefinite terms. Ardagh alerts the Court to the issue of indefiniteness of these terms here, but understands that issues relating to indefiniteness and invalidity of the Patents-in-Suit will be addressed later in the litigation.

E. The Calculating Steps (Step 6 and Step 7 of the Lehman Patent)

Because Plaintiffs address the Steps 6 and 7 of the Independent Claims in the Lehman Patent together (hereinafter, the “Calculating Steps”), Ardagh first discusses the temporal limitations, “in real time” and “not based on process feedback after melting,” which

apply to both steps, but then Ardagh discusses to construction of the second calculating step in particular in light of a fundamental flaw in Plaintiffs' construction.

Plaintiffs invoke the open-ended nature of "comprising" to capture what it surrendered during prosecution. (D.I. 60, Plaintiffs' Opening Claim Construction Brief at 16.) Plaintiffs argue that the statements made during prosecution did not disavow process feedback after melting, but the claims "contain *something more*, specifically, a pre-melting calculation of what the recipe of ingredients in the batch should be." (*Id.* (italics in original, underlining added).) However, in making their argument, Plaintiffs capture the essence of Ardagh's proposed construction—that the calculations are limited to "pre-melting calculation[s]," and do not account for process feedback as disavowed during prosecution.

The limitations "in real time" and "not based on process feedback after melting" modify the claimed "*something more*," not the unclaimed (prior art) steps that form no part of the claimed invention. The Patentee stated "the amounts of colorants and decolorants added to the glass batch to be adjusted in **real time** (*i.e.*, not based on process feedback after melting) based on characteristics and amount of input mixed color cullet." (Lehman Patent, Prosecution History, Supplemental Amendment, at 14 (GM000329) (Sep. 7, 1999) (emphasis in original) [J.A. Tab 6 at A0130].) This Court should not permit Plaintiffs to recapture in claim construction what was given up to secure the Lehman Patent.

Turning now to the second calculating step specifically, Plaintiffs argue first for no construction and then propose a construction that is, simply, wrong, evidencing a need for construction. Plaintiffs argue no construction is needed or alternatively offer the overly simplistic "calculating the amount of each ingredient, expressed as a percentage of the amount of the total batch." (D.I. 60, Plaintiffs' Opening Claim Construction Brief at 15 (emphasis added).)

Not only does the proffered construction omit words found in the claim, specification, and prosecution history, it is simply wrong. Dr. Lehman testified that “the computational output of calculating step two is the composition of the finished glass as given in [Fig.] 12B, the last line, calculated oxide composition.” (Burton Decl. at Exhibit A ((Rough Draft) Transcript of the Deposition of Richard Lehman at 132 (lines 8-12).) The cited line can be seen in the table below which reproduced from Figure 12B of the Lehman Patent (J.A. Tab 2 at A0034):

Glass Oxides====>	SiO2	Al2O3	CaO	MgO	BaO	Na2O	K2O	Fe2O3	TiO2	S(tot)	Cr2O3	COB	RN
Target Glass (default given) ==>	71.90%	1.70%	11.10%			13.80%	0.16%	0.250%		0.350%	0.230%		-30
Calculated Oxide Composition ==>	72.00%	1.73%	11.32%	0.32%	0.00%	13.52%	0.20%	0.250%	0.068%	0.350%	0.229%	0.114%	-30

Notably, the table shows the percentages of “selected components” (*e.g.*, SiO₂), not the ingredients (*e.g.*, Sand). (*Id.*)

A careful review of the claims suggests Dr. Lehman may be correct. The claims call for calculating the composition of recycled glass, “said composition including said percentage of said raw materials, said mixed color glass cullet, and amounts of said glass coloring oxide agents” (*See e.g.*, Lehman Patent at Claim 1 [J.A. Tab 2 at A0061].) “Said percentage of said raw materials” at first blush appears to refer to raw materials or “ingredients,” but “said percentage” with respect to raw materials refers back to “percentages of selected components of said virgin glass raw materials,” which provides antecedent basis for “said percentages” in both calculating steps. Thus, the calculation provides “said percentages” of selected components of the raw materials (*e.g.*, SiO₂) as supported by Dr. Lehman’s testimony.

Plaintiffs’ proposed construction evidences a complete lack of understanding of the claimed calculations which are the heart of the invention itself.

F. “finished glass product” and “recycled glass product”

Ardagh requests that “finished glass product” be construed to mean “recycled glass product.” Ardagh seeks to construe “finished glass product” to be the “recycled glass

product,” that is both refer to the product created by the method (*e.g.*, a bottle). The Lehman Patent indicates both “recycled glass products” and “finished glass products” can be products such as beer bottles. (*See* Lehman Patent at Abstract, 6:20-21 [J.A. Tab 2 at A0007, A0051].)

Plaintiffs explain “the word ‘finished’ is used to describe the state of glass at the end of the melting process.” (D.I. 60, Plaintiffs’ Opening Claim Construction Brief at 20.) In support, Plaintiffs point to the Lehman Patent at Claim 1, Step 3 (“finished glass from which said recycled glass products are to be created.” (*Id.* (emphasis added).) However, the word “product,” which Plaintiffs appear to be ignoring, indicates something more than raw glass fresh from the furnace. Accordingly, finished glass products *are* recycled glass products, and should be construed as such.

III. Conclusion

Ardagh respectfully requests that the Court reject Plaintiffs’ proposed constructions and adopt Ardagh’s proposed constructions, set forth above and in Ardagh’s Opening Claim Construction Brief, for the reasons stated herein.

Dated: March 11, 2015

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CERTIFICATE OF SERVICE

I hereby certify that on March 11, 2015, a copy of the foregoing **DEFENDANT'S RESPONSE TO PLAINTIFFS' OPENING CLAIM CONSTRUCTION BRIEF** to be electronically filed with the Clerk of the Court using CM/ECF, which will send electronic notification of such filing to all counsel of record.

/s/ James H. S. Levine

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